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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.   | CONFIRMATION NO. |
|--|-------------|----------------------|-----------------------|------------------|
| 10/722,101   | 11/24/2003  | Gilbert Farmer       | 13DV-13978-2          | 6357             |
| 29399  | 7590        | 07/06/2005           | EXAMINER              |                  |
| JOHN S. BEULICK<br>C/O ARMSTRONG TEASDALE LLP<br>ONE METROPOLITAN SQUARE<br>SUITE 2600<br>ST. LOUIS, MO 63102-2740 |             |                      | ELVE, MARIA ALEXANDRA |                  |
|  |             | ART UNIT             |                       | PAPER NUMBER     |
|  |             | 1725                 |                       |                  |
| DATE MAILED: 07/06/2005  |             |                      |                       |                  |

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                               |                  |
|------------------------------|-------------------------------|------------------|
| <b>Office Action Summary</b> | Application No.               | Applicant(s)     |
|                              | 10/722,101                    | FARMER ET AL.    |
|                              | Examiner<br>M. Alexandra Elve | Art Unit<br>1725 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 24 November 2003.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 6-8 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 6-8 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 24 November 2003 is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

|   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/24/03</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 6 & 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Kurokawa et al. (USPN 5,302,795).

Kurokawa et al. discloses the welding of a combustion liner body. Rings of the liner body are welded together. Liner segments are overlapped (figure 10). Laser beam welding is one joining method. Welding is carried out over the whole circumference of the ring. The liner body (1) and the joining operation are shown in figure 2. (abstract, figures, col. 3, col. 6-7)

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kurokawa et al. as stated in the above paragraph and further in view of Falls et al. (USPN 5,375,420).

Kurokawa does not teach the use or presence of a flange in the annular ring assembly.

Falls et al. disclose an annular combustor having upper and lower walls, which include flanges. These flanges extending from the liner creating cavities, thus enhancing cooling. (abstract, figures)

It would have been obvious to one ordinary skill in the art at the time of the invention to include a flange, as taught by Falls et al. in the Kurokawa et al. combustor liner welding process because of the enhanced cooling and hence more efficient engine operation.

Claims 6 & 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kenworthy (USPN 4,485,630) in view of Van Blarigan et al. (USPN 4,358,658).

Kenworthy discloses an annular combustor liner made up of a plurality of annular liner segments. An annular welding nugget joins these liner segments. Segments contain a forward and aft end, as shown by the aft end of the nugget. (abstract, figures, col. 1, lines 17-28, col. 2, lines 50-60, col. 3, lines 17-36, col. 4, lines 28-38)

Kenworthy teaches welding but does not specifically teach the method of welding or the type of welding.

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Van Blarigan et al. discloses a laser welding jig for welding around irregular shapes. Welding is done in a rotational fashion, whereby the article or the welder is rotated. (abstract, figures, cols. 1-3)

It would have been obvious to one of ordinary skill in the art at the time of the invention to use a laser welding jig, as taught by Van Blarigan et al. in the Kenworthy combustor liner welding process because of the ease and precision created by using laser welding and a jig.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kenworthy and Van Blarigan et al., as stated in the above paragraph and further in view of Falls et al.

Kenworthy and Van Blarigan et al. do not teach the use or presence of a flange in the annular ring assembly.

Falls et al. disclose an annular combustor having upper and lower walls, which include flanges. These flanges extending from the liner creating cavities, thus enhancing cooling. (abstract, figures)

It would have been obvious to one ordinary skill in the art at the time of the invention to include a flange, as taught by Falls et al. in the Kenworthy and Van Blarigan et al. combustor liner welding process because of the enhanced cooling and hence more efficient engine operation.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See US PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Alexandra Elve whose telephone number is 571-272-1173. The examiner can normally be reached on 6:30-3:00 Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on 571-272-1171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

June 23, 2005.



M. Alexandra Elve  
Primary Examiner 1725